



# NE CASC

Northeast Climate Adaptation Science Center

## Protecting Virginia's Resources for a Safer, Brighter Future

Northeast Climate Adaptation Science Center (NE CASC) research shows how climate impacts threaten our natural and cultural resources, and helps managers adapt to key challenges, including:

- **Range-shifting invasive species** are threatening forests, freshwater, and coastal ecosystems.
- **Increased coastal flooding** due to rising sea levels and more frequent storms is damaging infrastructure.
- More frequent extreme heat events and summer droughts **increase mortality in fish and wildlife** and decrease agricultural productivity.
- Shifting seasons are **disrupting the migration** of fish and wildlife species.



### What We Do at NE CASC

- Help **federal, state, and Tribal agencies** prepare for floods, droughts, and other extreme weather events.
- Assess the **vulnerability of fish, wildlife, and their habitats** to changing climate conditions.
- Incorporate cutting edge science into **conservation planning** to improve ecological resilience.
- Prepare **early-career researchers** to develop science that serves natural and cultural resource managers.

### Who We Are

NE CASC is part of a network of nine regional climate adaptation science centers managed by the U.S. Geological Survey National Climate Adaptation Science Center and is hosted by the University of Massachusetts Amherst. Our affiliated partners include Columbia University, Cornell University, University of Vermont, Woodwell Climate Research Center, United South and Eastern Tribes, Inc., and the USFS Northern Research Station.

# NE CASC Successes in Virginia

## SUPPORTING WILDLIFE

- Incorporating climate information into 2025 revisions of [State Wildlife Action Plans](#), helping Virginia better prepare for changing environmental conditions - *partnership with VA Department of Wildlife Resources (DWR)*
- Designing methods to [enhance existing wildlife monitoring programs](#) by evaluating the effects of climate change on fish and wildlife - *partnership with VA DWR*
- [Supporting restoration planning for red spruce forests](#) in the Central Appalachian mountains, which serve as critical habitat for species of conservation concern, by **prioritizing locations for management action** - *partnership with Virginia Cooperative Fish and Wildlife Unit and Virginia Tech*



## DEVELOPING EFFECTIVE AND EFFICIENT COASTAL MANAGEMENT

- Providing technical assistance and structured decision-making facilitation to support the management of coastal infrastructure with adaptive strategies for managing saltwater intrusion, threats to coastal dunes, and vital migratory bird habitats, including waterfowl. - *partnership with Back Bay National Wildlife Refuge*

## PROACTIVELY MANAGING INVASIVE SPECIES

- Established the [Northeast Regional Invasive Species & Climate Change \(RISCC\) Network](#), which connects delivers actionable science to **support invasive species early detection and climate-smart management**. - *Broad partnership of natural resource managers, researchers, and policymakers in Virginia and across the Northeast.*
- [Identifying and modeling invasive aquatic species](#) likely to spread to Virginia in the coming years to **improve preparedness, early detection and rapid response** by resource managers. - *partnership with the National Park Service and stakeholders throughout the eastern US*

## ADVANCING ADAPTATION PLANNING THROUGH TRIBAL PARTNERSHIPS

- Support an annual events, including [Tribal Climate Resilience Camp](#), which brings together representatives from Tribal Nations to **share technical expertise and advance adaptation planning**. - *partnership with the United South and Eastern Tribes (USET), including Nansemond Indian Nation in Virginia*



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